Determining the Best Pedagogical Practices for Diverse Grammatical Features

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Abstract

Past research has emphasized the universality of grammar acquisition over key differences, resulting in the development of a number of one-size-fits-all approaches to grammar instruction. Because such approaches fail to consider disparities of grammatical features, they are often ineffective. Just as a doctor needs to diagnose an illness and prescribe a suitable treatment, the teacher must evaluate a grammatical feature and choose an appropriate instruction. To better understand how this may be accomplished, highly disparate grammatical features (the definite article and plural noun) were taught to adult second language learners, using three different pedagogical techniques: Explicit focus on meaning, explicit focus on form, and implicit focus on form. Results suggest that the effectiveness of these treatments depends upon characteristics of the grammatical feature, the type of instruction utilized (implicit or explicit), and the learner's language proficiency. According to the results, an empirical method to guide the content of grammar instruction is proposed.

Key words: *explicit grammar instruction, implicit grammar instruction, semantic complexity, morphosyntactic complexity, learner proficiency, focus on form, focus on meaning*

1   Introduction

Researchers have developed a number of different theories to explain the seemingly universal nature of grammar development (Cook, Newson & Ning 1988, Freidin 2014, McCarthy 2004, Montague 1970, White 2009). Chomsky (1975, 1981, 1986), for example, posited that there is an innate system of syntactic constraints called *principles* and *parameters*. *Principles* are thought to represent the universal elements found in all languages, while *parameters* represent "on / off switches" set on a language-specific basis (Mitchell & Myles 2004). While such syntactic theories increase the saliency of the acquisition process, they cannot holistically explain linguistic development. Concerning this issue, Pinker (1994: 105) explained that:

> The principles and parameters of phrase structure specify only what kinds of ingredients may go into a phrase in what order. They do not spell out any particular phrase. Left to themselves, they would run amok and produce all kinds of mischief.

As this statement implies, innate notions of grammar structure alone are not sufficient to explain the formation of language. In addition to aspects of syntax and morphology, language learners must be born with innate notions such as place, agent, and patient, which are used to further regulate linguistic structures and imbue them with meaning (Pinker 1994).

While innate mechanisms controlling morphosyntactic and semantic aspects of language construction are well known (Chomsky 2011, Costello & Shirai 2011; Helms-Park 2002,

Mitchell & Myles 2004, Pinker 1994), they represent only one facet of language formation. Memory is yet another essential element of the language construction process. Research suggests that language use relies considerably on information received from a lexical store, which resides in long-term memory (Pinker 1991, Eberhard, Cutting & Bock 2005). The lexical store may best be characterized as a 'mental dictionary' which holds syntactic, morphological, and semantic information about words and phrases. Realization of the importance of this type of long-term memory has led cognitive theorists such as Chomsky (1995) to suggest that it is a main component of the acquisition process (Gass & Selinker 2008, Mitchell & Myles 2004).

Short-term memory, also referred to as 'working memory', is yet another essential element of language construction. It temporarily stores input that is to be parsed or, conversely, output that is being constructed. As posited by Baddeley (1990, 1999), the working memory is governed by a central executive which is supported by a visuo-spatial sketchpad and a phonological loop. The visuo-spatial sketchpad stores semantic information while the phonological loop holds acoustic information that must constantly be refreshed through articulation (either saying or thinking the words) (Cook 2008).

2   Theoretical Framework

In an attempt to integrate and explain essential components of the language acquisition process, researchers have designed some holistic theoretical frameworks (Hurford 1989, Levelt 1989, 1996, and 2001). Levelt (1989), for example, developed a cognitive model explaining the formation of linguistic output (Figure 1). According to this model, a semantic representation of an utterance is first developed by a cognitive conceptualizer. The resulting semantic conceptualization is then programmed into language by a grammatical encoder. Finally, the encoder works to combine and modify elements of the lexicon so that a grammatically correct representation of the semantic concept may be constructed (Bock 1986, Pienemann 2005).
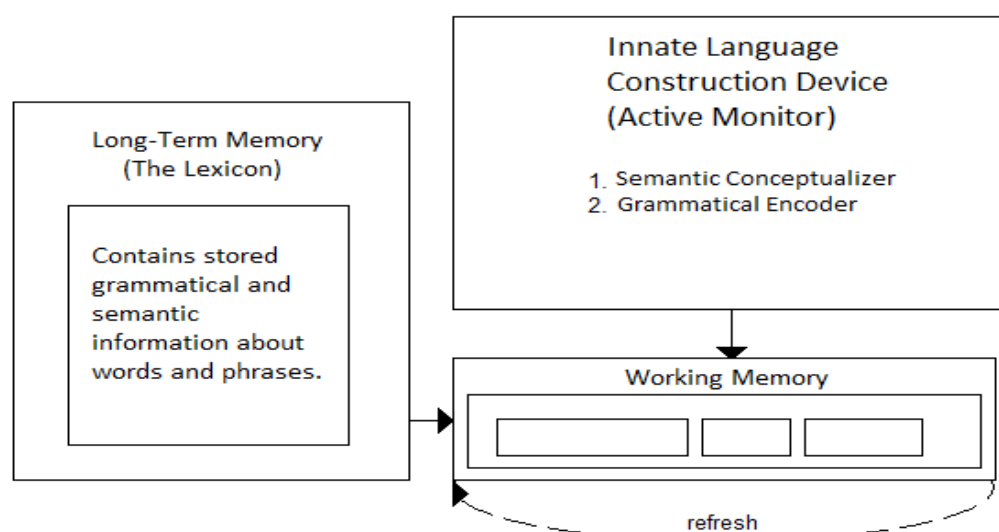
Figure 1: Model of an innate language construction device

As Levelt's (1989) linguistic device includes both semantic and morphosyntactic elements of language construction, it provides a more holistic view of the Second Language Acquisition (SLA) process. While the conceptualizer implies the presence of semantic constraints such as those hypothesized by Pinker (1994), the encoder implies morphosyntactic constraints such as those hypothesized by Chomsky (1975, 1981 and 1986). According to the model, elements of a word, phrase, or sentence in working memory come from the lexicon and are organized by the innate construction mechanism. If information cannot be retrieved lexically, it must be cognitively generated. Such cognitive production is more difficult than retrieval from a lexical store, since the innate language construction device must be more extensively utilized. Exhaustive utilization of the device, in turn, may put burdens on the working memory that serve to limit performance. In addition to gaps within the lexicon, a more conscious evaluation of linguistic output, referred to by Krashen (1981) as a "monitor", may increase demands on the innate construction mechanism, thereby influencing linguistic functioning.

Since the inception of English as a Second Language (ESL) instruction, the role of grammar in the pedagogical process has been of central concern. Initially, students learned grammar by translating texts into and from English. While this instructional method which is referred to as the *grammar-translation method* allowed students to understand written texts, it did not encourage natural use of the target language. As a result, learners had difficulty gaining communicative competence (Celce-Murcia 1991, Huang 2010). To address this issue, educators soon crafted and utilized a new pedagogical technique. This method, known as the *audio-lingual method*, prompted students to learn through a process of habit formation. Learners listened and repeated sentences that contained grammatical features and expressions. While this technique encouraged the spoken use of the target language, there was little natural communication. As with the grammar-translation method, students who learned through the audio-lingual method continued having problems with both oral and written forms of natural communication (Thornbury 1999: pp. 21).

Due to shortcomings with prior instructional approaches that were primarily grammar-based, a new pedagogical approach was developed which downplayed the importance of grammar and emphasized learning through natural communicative tasks. Unfortunately, educators soon realized that learners who acquired a language via this approach could communicate, but had significant problems utilizing correct grammar to express themselves (Lightbown 1998, Lightbown 2000). This shortcoming resulted in a resurgence of interest in grammar-based instruction (De Jong 2005, Lightbown, Halter, White & Horst 2002). While modern research now suggests that some kind of grammar emphasis is needed, there is still considerable controversy over how this emphasis should be pedagogically facilitated (Han 2012, Norris & Ortega 2000, Spada & Tomita 2010).

In essence, the failure to concretely determine an effective type of language instruction reflects a broader issue that has plagued both SLA research and ESL instruction. Just as models of language acquisition have overstressed the 'universal' nature of morphosyntax, methods of instruction have overemphasized a one-size-fits-all paradigm for teaching grammar. In reality, different forms of instruction are needed to accommodate the highly disparate characteristics of syntactic and morphological features. Educators cannot use the same type of instruction for each grammatical feature and expect an equally fruitful outcome. To determine what type of instruction is needed, diverse characteristics of grammatical features must be considered. As DeKeyser (2005) points out, grammatical

features may differ significantly in both morphosyntactic and semantic complexity. This assertion is illustrated through examination of grammatical features associated with the noun phrase. Regular plural nouns, which use regular forms such as *-s, -ies, or –es* (e.g. *cars*, *libraries*, *grasses*), are relatively simple morphologically as well as semantically (they only contain the meaning 'plural'). Lexical plural nouns, in contrast, which require a complete change of the singular noun (e.g. *children*, *men*, *teeth*), are morphologically more complex, since they have a larger number of variants. The article has very few morphological variants (*a*, *an*, *the*). Unlike the plural nouns, however, it is semantically very complex, and may be used to signify semantic concepts such as: unique objects in our world (e.g. *the sun*), groups in society (e.g. *the homeless*), parts of a list (e.g. *the first thing is…*), superlatives (e.g. *the biggest, the best*), and things already mentioned in a story (e.g. *A man talked to the woman. The man said, "Hi"*) (Celce-Murcia, Larsen-Freeman & Williams 1983: pp.279).

As grammatical features differ significantly, educators must learn to facilitate acquisition by differentiating instruction. The development of such an approach requires not only a comprehensive understanding of the factors that influence acquisition, but a firm knowledge of the pedagogical techniques that effectively utilize these factors. While many of the causes influencing grammar development have been established within a universal framework of acquisition, the contemporary corpus of research has not clearly established how manipulating these factors can enhance the learning of different grammatical features (Spada & Tomita 2010). To resolve this issue, Han (2012) has suggested that the following elements of instruction be concomitantly considered:

- Variable characteristics of each grammatical feature (e.g. semantic and morphosyntactic)
- Type of instruction (e.g. explicit vs. implicit)
- The developmental level of the learner

The simultaneous consideration of the above factors will help educators determine what type of instruction should be used for each grammatical feature, how instruction should be used, and at what time it should be used. This type of comprehensive investigation is needed before curricula and instruction can be engineered to bring about a desired result. Thus, the current study was designed to holistically examine three influences on grammar acquisition:

- semantically and morphosyntactically diverse characteristics of grammatical features,
- different types of instruction, and
- learners' proficiency levels.

2 Method

2.1 Participants

For this quasi-experimental study, three university English-as-a-Foreign-Language classes were selected at a small university in South Korea (*N* = 47). Learners were distributed

within the following proportions: Group 1 (*n* = 15), Group 2 (*n* = 15), and Group 3 (*n* = 17). While most of the students were South Korean, learners from other countries were also represented: Chinese (*n*= 6), Mongolian (*n* = 1), and Tajikistani (*n* = 1). All learners ranged in age from 18 to 21 years.

2.2 Procedure

As pointed out by Asselin (2002), grammar may represent both "the conscious knowledge of language structures" and "the unconscious knowledge of language that allows people to produce and comprehend language" (Asselin 2002: 52). Consequently, both conscious and unconscious forms of knowledge about grammatical features were evaluated within this study. To examine the effects of grammar instruction on the acquisition process, three grammatical features associated with the noun phrase were chosen: the regular plural (e.g. *cars*, *libraries*, *grasses*, etc.), the lexical plural (e.g. *children*, *men*, etc.) and the definite article *the*. These features were selected because their morphosyntactic and semantic characteristics are highly disparate.

Before treatments were given to the three groups, participants each took a pretest. The pretest contained two fill-in-the-blank worksheets each having 10-14 questions - the worksheets were obtained from *learnenglishfeelgood.com* - to test conscious knowledge of correct article and plural usage. Learners were given as much time as they needed to complete the worksheets. As pointed out by Ellis (2005), untimed exercises such as these are better measures of conscious or explicit knowledge than timed exercises. Following the measure of conscious knowledge, learners were given two images and three minutes to write a paragraph for each. This task was timed to obtain a better measure of natural ability or implicit knowledge of each grammatical feature. Timing the activity minimized the degree that students could consciously correct errors, ensuring the validity of the measure (Ellis 2005). To score each test section, correct answers were divided by the total number of answers (or the total number of required contexts for the natural writing task). For the natural writing task, ratings of grammatical errors (missing or incorrect forms of the target feature) for one of the groups were compared to those of an additional native English-speaking rater to assess reliability. The resulting Cronbach's *a* value of 85.4% suggested that the method of assessment was a reliable measure of grammatical accuracy. After all the pretests had been scored, the non-parametric Kruskal-Wallis statistical formula was used to confirm that the distribution of pretest scores did not significantly differ across groups. This suggested that there was no significant difference between the groups at the beginning of the study.

Following the administration of the pretest, three treatments were randomly assigned to three different groups. Each group received an initial lecture using a PowerPoint with examples from the topics covered in Appendix A. The PowerPoint and explanation, however, varied depending upon the treatment:

- Group 1 received explicit treatment of semantic concepts (e.g., images and graphic organizers with explanation);

- Group 2 received implicit treatment of morphosyntactic features (e.g., sentence examples);

- Group 3 received explicit treatment of morphosyntactic features (e.g., sentence examples with explanation).

Following the treatment, all learners received a handout so that they could review and practice the concepts learned during the treatment (Table 1):

Group 1	Group 2	Group 3
Explicit Focus on Meaning: PowerPoint mini-lecture with images and semantic maps.	*Implicit Focus on Form*: PowerPoint mini-lecture with sentence examples.	*Explicit Focus on Form*: PowerPoint mini-lecture with explanation of grammatical forms along with the same sentence examples presented to Group 2.
Handout: The main topics of the semantic map are provided but the information in the bubbles is blanked out. Learners must fill in the bubbles and add their own bubbles. They must then orally make sentence examples.	*Handout*: Learners see the sentence examples presented in the mini-lecture. They practice speaking the sentence examples. They are then encouraged to make additional sentence examples by speaking.	*Handout*: Learners see the sentence examples presented in the mini-lecture. They circle all the grammatical features emphasized in the lecture. They practice speaking the sentence examples and make additional sentence examples.

Table 1: Summary of treatments for each group

Group 1 received an explicit focus on meaning. The teacher intentionally drew attention to semantic aspects of the target features through describing images and graphic organizers included within a PowerPoint.

Following the PowerPoint, learners were given a handout with the images and bubbles only. Students had to fill in the bubbles according to the images. They were then asked to expand on the bubbles and make sentence examples, using the target features.

The second group received an implicit focus on form. Using a PowerPoint, learners were each shown sentence examples which contained the same target features as those presented to Group 1. Sentences such as the following were read to students (notice that the target features parallel those presented to the semantic treatment group):

1. I went to the airport last night to pick up my best friend. He just came home.

2. Could you stop by the supermarket on your way home from work? I need some milk.

3. I stopped at the store and bought a new shirt.

4. I went to the movie theater to see a new movie, but it was closed.

5. He gave me an apple.

6. He gave me some apples.

Following the PowerPoint, learners were given a handout containing the same sentence examples. They were then asked to practice reading the sentences out loud to each other

and practice speaking, using vocabulary and expressions from the sentences. No explicit explanation or mention of the target grammar was included within this treatment.

The Group 3 was shown the same sentences in PowerPoint and handout as Group 2. Group 3, however, received an explicit grammar explanation. The teacher explained aspects of syntax and morphology (sentence position of the target feature and form) for each feature and then read the same sentence examples as Group 2. Any semantic explanations were avoided. Learners were then given the same sentences in a handout as the implicit group. Group 3, however, had to circle and identify the grammatical features in the handout. After correctly identifying the target features, learners were asked to read the sentences out load and to practice making their own sentences.

Following the treatment, each group was directly given a posttest. The form of the posttest was identical to that of the pretest, although different worksheets and images were used (The worksheets were obtained from *learningenglishfeelgood.com*). Because of the high degree of variability in plural forms (due primarily to lexical characteristics), five different plural forms covered in the treatment were also tested within the posttest assessment of conscious plural knowledge use (*lives, sheep*, *mice*, *houses*, and *libraries*). It was thought that such coverage would more accurately assess the influence of the treatment, since participants could not be expected to use lexical forms they had never seen. After the posttest, descriptive statistics revealing the degree of improvement were calculated and graphically charted. Next, the significance of statistical differences between pretest and posttest for the target grammatical features were determined using a paired samples T-test. Finally, improvement was compared to participants' English proficiency scores, which were obtained from a TOEFL-style test of listening, speaking, reading, writing, and vocabulary skills. To obtain a basic estimate of the influences of language proficiency, learner improvement scores were further subdivided into two groups (high and low proficiency) through using median values. While the proficiency assessment was a useful tool within this study to examine basic relationships between English proficiency and the effects of different types of grammar instruction, future studies will need more precise measures and more detailed differentiation of proficiency levels.

3 Results and Discussion

3.1 Analysis of Group Treatment

Results of the group treatments revealed different rates of conscious learning for each target feature (Appendix B). Figure 2, which shows the degree of improvement from pretest to posttest, reveals that Group 3 (the Explicit Focus-on-Form Group) had the highest gains for all three features. The regular and lexical plural features increased by 25% and 21%, respectively, on the posttest, while the definite article rose by 9% only. Group 2, which received implicit grammar instruction, revealed more moderate gains in conscious knowledge of the regular plural, the lexical plural, and the definite article; posttest scores increased by 20%, 17%, and 6%, respectively. Group 1, which received the semantic treatment, yielded a 23% gain on the lexical plural. This value was higher than that of Group 2, but lower than that of Group 3. Mean differences for the regular plural and definite articles were lowest within the semantic treatment group (15% and -2%,

respectively). The negative value for the improvement of the definite article suggests that the semantic treatment hindered the participants' abilities to identify the correct article.
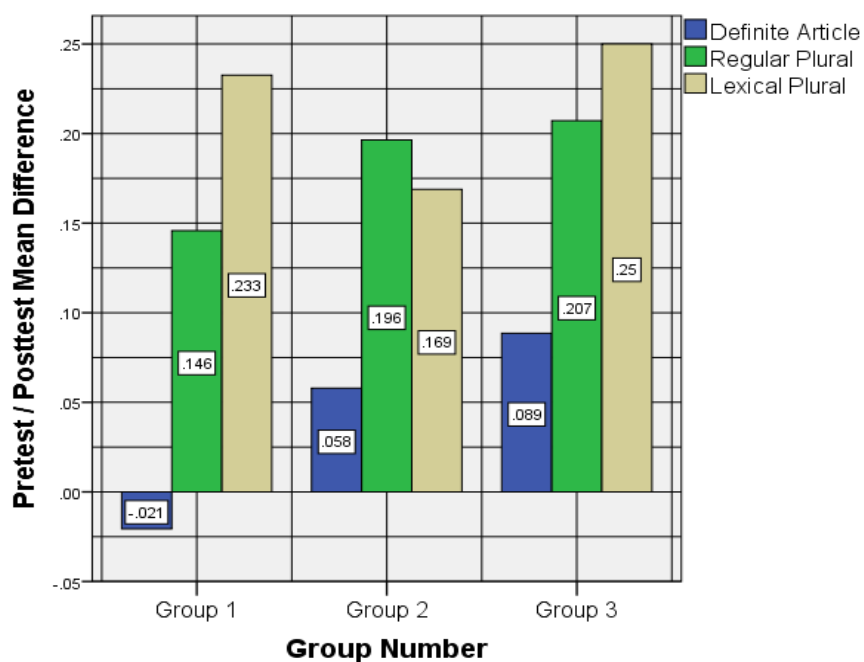

Figure 2: Difference in the mean between pretest and posttest of conscious knowledge

With the exception of article use for Group 1, the participants' knowledge of the usage of all grammatical features increased after each form of treatment. The Wilcoxon Signed Ranks Test indicated that an improvement for aspects of the plural was significant for each group (Table 2):

		Definite Article	Regular Plural	Lexical Plural
Group 1	Z	b -.142	b -2.090	b -2.411
	Sig. (2-tailed)	.887	.037	.016
Group 2	Z	b -1.449	b -2.400	b -2.322
	Sig. (2-tailed)	.147	.016	.020
Group 3	Z	b -2.325	b -2.849	b -3.221
	Sig. (2-tailed)	.020	.004	0

a. Wilcoxon Signed Ranks Test .   b. Based on negative ranks.   d. The sum of negative ranks equals the sum of positive ranks.

Table 2: Significance of improvement of conscious knowledge of each grammatical feature

While the regular and lexical plural revealed significant gains for each group, Group 3 had the most significant results, yielding respective *p* values of .004 and .001. Groups 1 and 2 did not show any significant gains for the definite article. Group 3 (the Explicit Focus-on-Form Treatment Group), however, did reveal significant gains.

Results concerning the use of grammar on the natural language writing task differed from those of conscious grammar knowledge (Appendix C, Figure 3). Group 2, for example, which did not receive any explicit grammar treatment, seemed to be negatively impacted by the treatment. None of the grammatical features were used more proficiently on the posttest. Group 3, which received treatment focusing on the form of grammatical features in a sentence, revealed significant improvement in use of articles and lexical plurals, increasing by 19% and 32%, respectively. The explicit semantic treatment of Group 1 appeared to bring about slight gains in use of the article (3%) and regular plural features (10%):
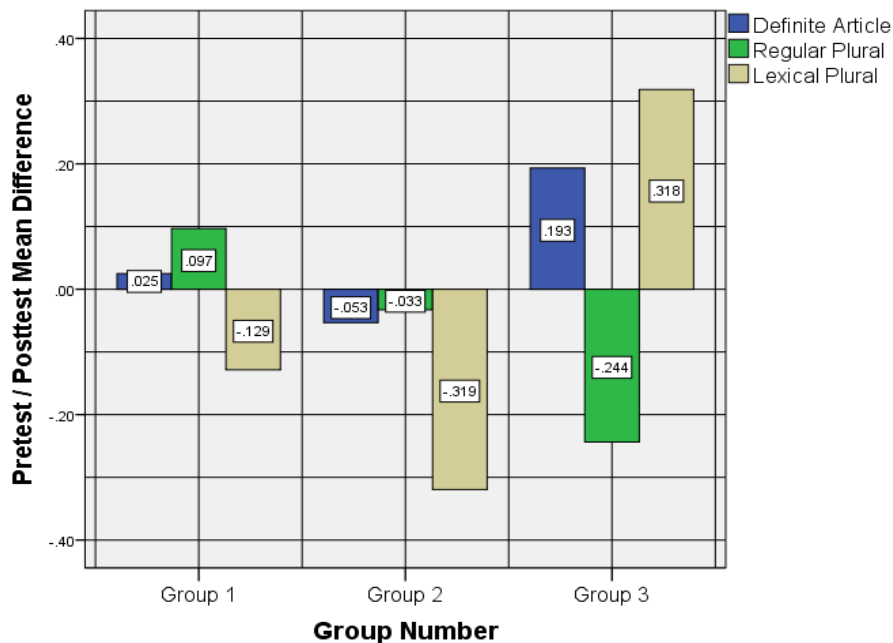

Figure 3: Mean difference between the pretest and posttest of natural language use

While Group 1 revealed gains for both the regular plural and definite article, neither of these gains was significant (Table 3). Only improvements in use of the regular plural and definite article for Group 3 were significant, revealing *p* values of .012 and .042. Overall, increases in grammatical accuracy for both groups with explicit instruction suggest that deliberate focus on either semantic or morphosyntactic concepts encourages learners to cognitively monitor and correct errors that occur in natural language:

		Definite Article	Regular Plural	Lexical Plural
Group 1	Z	-.595[b]	-.271[b]	.000[c]
	Sig. (2-tailed)	.552	.786	1.000
Group 2	Z	-.981[c]	.000[d]	-1.342[c]
	Sig. (2-tailed)	.327	1.000	.180
Group 3	Z	-2.511[b]	-2.032[c]	-1.786[b]
	Sig. (2-tailed)	.012	.042	.074

a. Wilcoxon Signed Ranks Test.   b. Based on negative ranks.
c. Based on positive ranks.   d. The sum of negative ranks equals the sum of positive ranks.

Table 3: Significance of improvement of natural ability of each grammatical feature

3.2 Analysis of Group Treatment and Language Proficiency

While our analysis of group achievement revealed important information about the effectiveness of treatments, the further subdivision of improvement according to proficiency level yielded even deeper insights:
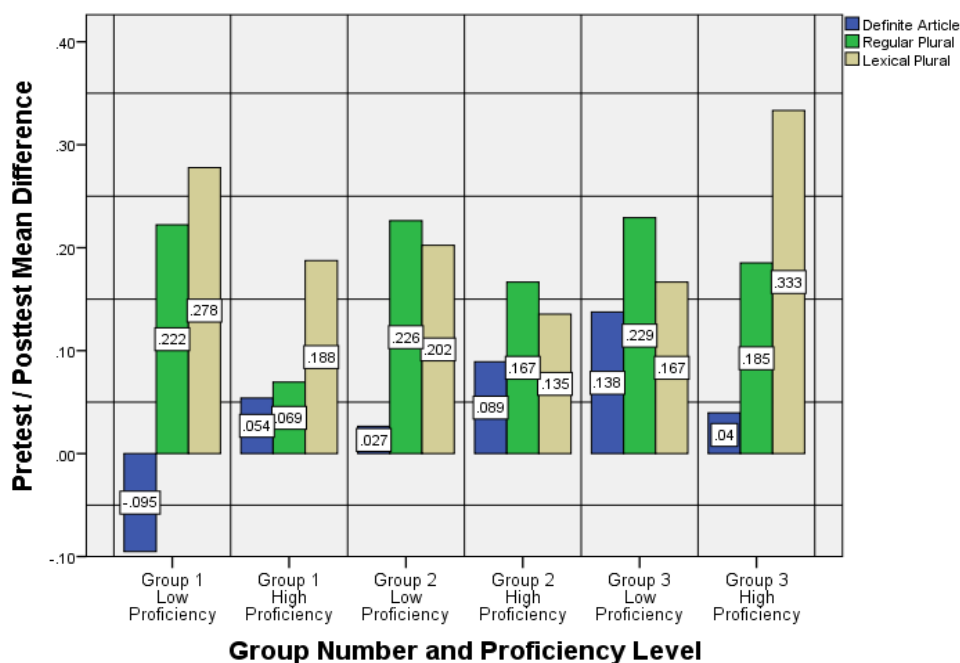

Figure 4: Pretest / posttest mean difference of conscious knowledge based on proficiency level.

Figure 4 suggests that the semantic treatment provided in Group 1 may be ineffective only for learners of lower proficiency. Learners in the higher proficiency level of Group 1 revealed gains that were slightly higher than those of the high proficiency level of the Explicit Focus-on-Form Treatment Group. The difference in achievement within the high and low proficiency levels of the semantic group suggests that learners must have a certain level of proficiency before they can benefit from the explicit semantic treatment used within the study. This view is supported by qualitative analysis. Students with higher proficiency levels tend to correctly identify and expand upon concepts included within the handout. Utilizing conceptions of "unique things in our world" or "unique things in our society", for example, high proficiency learners were able to correctly identify concepts such as *the earth*, *the poor*, *the sun*, and *the hungry,* and were able to generate new concepts such as *the stars*, *the land*, *the sea*, *the UN*, and *the weather*. Learners of lower proficiency, however, had difficulty completing the handout and tended to just copy or mimic the expressions used within the treatment. If such semantic treatment is provided to lower proficiency groups, semantic complexity might need to be simplified by utilizing just one, highly simplistic semantic concept. The definite article, for example, could be explained as being simply "unique". Learners can then begin with a simple semantic concept and expand upon it as semantic information in the lexicon grows.

In contrast to the semantic group, the morphosyntactic treatment group revealed more significant gains in the low proficiency category for the definite article. This phenomenon may be explained by the largely bottom-up technique used within the treatment. Unlike the top-down semantic explanations associated with the definite article in Group 1, lower proficiency students of Group 3 received simple explanations about articles and their adjacent nouns (e.g. "the airport, the movies"). Thus, learners of lower proficiency could easily focus their attention on a singular concept (the adjacent noun) and could get the correct answer by copying and mimicking, rather than by advanced semantic analysis.

The high-proficiency group 3 gained more on the lexical plural than their low-proficiency counterparts. This phenomenon, as with the semantic treatment of the definite article in Group 1, may be a reflection of the complexity of the grammatical feature. Lexical features have a large number of variants. Thus, higher-proficiency-level learners may benefit more from the infusion of lexical variants than their lower-proficiency counterparts. As for the regular plural, achievement was fairly consistent for each group. Lower proficiency groups achieved more, while the higher proficiency groups achieved less. This consistency suggests that each type of treatment used within the study had similar benefits for this feature. This phenomenon may be a reflection of the morphosyntactic and semantic simplicity of the regular plural. Learners may be able to understand the feature without lengthy, explicit explanations or extensive grammar exercises, making pedagogical intervention less necessary.

The comparison of proficiency levels and natural use of grammar also yielded valuable insight (Figure 5). As with measures of conscious knowledge for Group 1, the semantic treatment for the definite article appeared to adversely influence the lower proficiency learners, while it positively influenced high proficiency learners. Low proficiency learners showed a mean gain of -2.6%, while the high proficiency group had a mean gain of 7.5%. Also similar to measures of conscious knowledge, the morphosyntactic-treatment Group 3 revealed larger gains in natural use of the definite article at the lower proficiency level.

Learners at the lower proficiency level, for example, showed a 27% increase in article use in writing, which was double that of the high proficiency level (11%). In Group 1, the low proficiency group revealed a large gain in the correct use of the regular plural (22%). As for the lexical plural, the high proficiency groups 1 and 3 both showed mean increases (14% and 43%, respectively). Only the low-proficiency learners of Group 3 had a mean gain for the plural lexical feature (21%). While learners in the explicit-treatment groups 1 and 3 both showed improvements in natural language ability, the implicit-treatment group 2 showed no improvement. Implicit learners actually had more problems with accuracy on the posttest writing task.
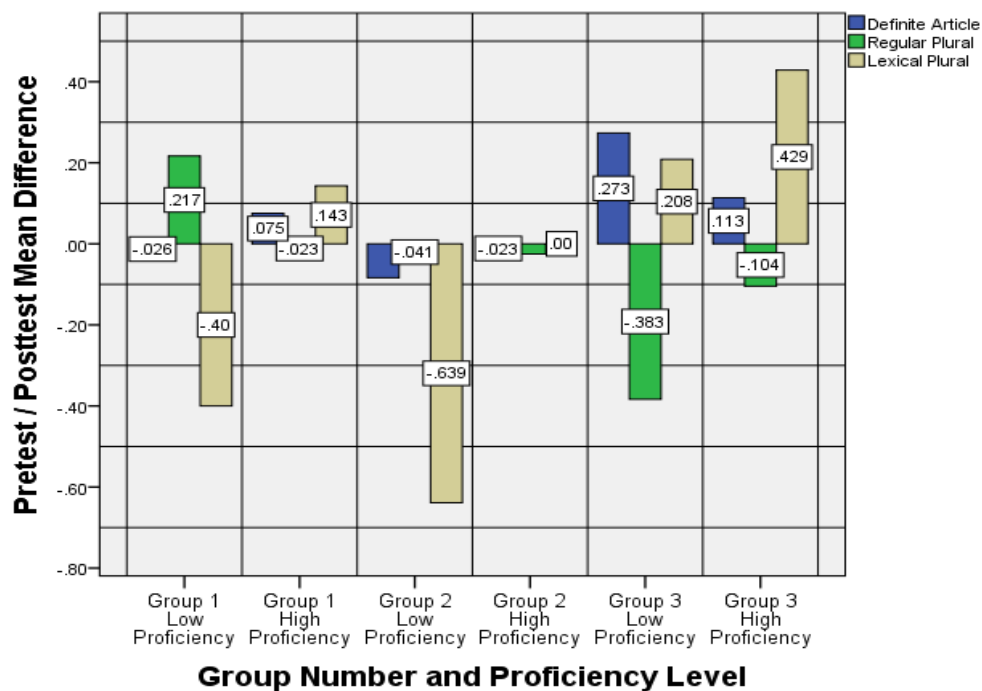

Figure 5: Pretest / posttest mean difference of natural language use based on proficiency level.

The mean gains or losses for different grammatical features on the writing task suggest that the effectiveness of treatments on natural language accuracy will vary according to characteristics of the grammatical feature, the type of grammar instruction (implicit vs. explicit), and the learner's proficiency level. Overall, explicit rather than implicit instruction appears to help learners to better monitor and correct natural language when complexity of the explicit instruction is commensurate with the leaner's proficiency level. Low proficiency learners appear to benefit from explicit treatments that include more simplistic semantic or morphosyntactic concepts. The regular plural, for example, may have improved for the lower proficiency learners of semantic-treatment group 1 because the feature has a singular semantic concept ('plural') which can easily be understood and consciously focused upon while writing. Unlike their lower-level counterparts, advanced proficiency learners may benefit more from explicit instruction with more semantic (e.g. the definite article) or morphosyntactic complexity (e.g. features with several lexical variants such as the lexical plural or the past irregular verb). This is suggested by improvements on more complex features in the higher proficiency levels of Group 1 and Group 3 (Figure 5). Higher proficiency levels may have a highly developed lexicon and proficiency which

allows them to concentrate on the semantic and morphosyntactic complexity of some grammatical features.

Through the analysis of natural language performance, it becomes clear that if more highly complex features are to be taught to low proficiency learners, they should be simplified. By teaching the concept of *unique* or *only 1*, for example, learners can gain a vague notion of the definite article's more complex semantic meaning. As proficiency increases, explicit semantic instruction covering more precise contexts of the definite article may be utilized. Like semantic aspects of grammar, highly complex morphosyntactic elements (e.g. highly lexical grammatical features) should be explicitly covered at higher levels of proficiency. If learners are proficient in English, they have a more highly developed lexicon that can be used to interpret complex concepts explicitly covered. The more highly developed lexicon reduces the load of semantically and morphosyntactically complex explicit instruction on working memory, ensuring that learners are able to monitor and improve their natural language performance. Within future research, more detailed measures of the interaction between instructional complexity and learner proficiency will be needed to improve pedagogical techniques and curricular designs that emphasize grammar.

4 Conclusion

Results obtained from measures of conscious knowledge suggest that both explicit and implicit forms of instruction help the learner to understand grammatical features. As learners have a lot of time to complete measures of conscious knowledge, they can carefully consider various elements of sample sentences they receive, including characteristics associated with target features. Like students who receive explicit instruction, learners who are engaged with implicit tasks have the time necessary to construe meaning from the multitude of semantic and morphosyntactic cues they view within instructional input.

Unlike measures of conscious knowledge, those of natural language ability suggest that only explicit forms of instruction are effective. Because learners who receive implicit instruction do not have a lot of time to process the morphosyntactic and semantic elements they encounter, they may fail to cognitively monitor and correct their errors. Learners who receive explicit instruction, in contrast, have a narrower scope to contemplate, which decreases burdens on internal cognitive monitors designed to correct speech errors. Thus, learners who have received explicit instruction appear able to correct errors more quickly and easily in natural language tasks such as writing.

In essence, the influences of implicit and explicit treatments on natural language are a manifestation of cognitive processes which are associated with an innate language construction device. The ineffectiveness of implicit instruction suggests that cognitive monitors of natural language errors are being distracted by other contextual factors within the input, while mixed results of explicit instruction seem to imply that cognitive monitors can only work when the semantic and / or morphosyntactic information being emphasized is commensurate with the learner's proficiency level. Learners of low proficiency who have a rudimentary understanding of basic semantic concepts need images or graphic organizers that are semantically simple. Therefore, explicit semantic instruction of the

regular plural, which has little semantic complexity, is appropriate at this stage. Explicit semantic instruction of the definite article is only appropriate at this level if semantic explanations are oversimplified (e.g. emphasis of a singular concept such as the definite article's meaning of 'uniqueness'). After learners have stored basic semantic concepts within their lexicon, they can benefit from more holistic explanations of meaning. As with explicit explanations of semantic characteristics, explicit forms of morphosyntactic instruction should be used to emphasize simple, more regular grammatical features at first. Morphosyntactically or lexically variable grammatical features may then be explicitly emphasized as the proficiency of a learner grows.

Results of the study suggest that explicit grammar instruction must be tailored to both characteristics of the grammatical feature and proficiency of the individual learner. The following chart illustrates how this may be done:

Proficiency Level	Semantic Concepts for Explicit Presentation (Top-down / Focus on Meaning)	Morphosyntactic Forms for Explicit Presentation (Bottom-up / Focus on Form)	Difficulty Level of Explicit Instruction (Load on Working Memory)
Low	plural	-s	1+ 1 = 2
	unique	the	1+ 1 = 2
	plural	-s, -es	1 + 2 = 3
Medium	plural	-s, -es, -ies	1+ 3 = 4
	unique things in our situation / unique things in our neighborhood / unique things in our city / parts of a list	the	4 + 1 = 5
	plural	teeth, feet, children, men, women	1 + 5 = 6
High	plural	-s, -es, -ies, teeth, feet, children	1+ 6 = 7
	unique things in our world / unique things in our society / unique situation / unique in our neighborhood / unique things in our city / elements of a list	the	6 + 1 = 7
	generic things / unique things in our world / unique things in our society / unique situation / unique in our neighborhood / unique things in our city	a, an, the	6 + 3 = 9

Table 4: Determining the difficulty level and appropriateness of explicit grammar instruction

Table 4 reveals how the content of explicit grammar lessons may be designed and evaluated for difficulty. As revealed in the table, semantic and morphosyntactic concepts can be carefully tallied and added to get a score for overall difficulty level. Because this technique considers both grammatical characteristics of a target feature and cognitive levels of proficiency, the explicit instructional concepts and techniques are tailored to the learner's level of interlanguage development. While useful, Table 4 remains only a rudimentary guide to the structure of explicit instruction. More study of the influences of explicit instruction on learners of different proficiency levels is needed to increase the efficacy of such curricular guidelines.

In the past, approaches to language instruction applied only one general principle to enact change. As suggested by the data within this study, however, instruction requires a multifaceted approach which has been designed according to characteristics of a grammatical feature and the cognitive level of a learner's development. The grammar-translation, audiolingual, and communicative methods were all ultimately doomed to fail because they were not synergistically combined to accommodate learner needs. In the future, the strengths of each approach should be integrated to increase their effectiveness. When a new integrated curricular framework for grammar is designed, the grammar-translation approach may be used to emphasize form and meaning; the audiolingual approach may be utilized to emphasize form and phonological characteristics; and the communicative approach may be used to emphasize semantic concepts, such as those which are linked to sociolinguistic contexts. Using this type of framework, instruction of highly variable lexical features such as the plural noun or the irregular past can be enhanced through a more extensive use of the grammar-translation or audiolingual methods. Instruction of semantically complex features such as the definite article can be improved through more communicative techniques that integrate images and videos from various sociolinguistic contexts. In essence, each pedagogical approach has a role in the instructional process. Researchers and educators must therefore develop a multifaceted framework that harnesses the influences of grammatical acquisition by utilizing the strengths of each teaching strategy. This will help to increase the efficacy of second or foreign language instruction.

Appendixes

Appendix I

Concepts Covered with Definite Article (8 Concepts)

1. Unique things in our world: the earth, the moon, the sun, the sky

2. Unique things in our society: the homeless, the hungry, the poor

3. Unique things in our neighborhood or city: the airport, the supermarket, the store, the movie theater

4. Unique things in our situation: the cup of coffee on the counter, the bathroom in our dormitory, the sofa, the stove, the swimming pool outside my house

5. Unique things in my life: the best book I have read, the greatest day of my life, the worst day of my life

6. Unique parts of a list: the first thing is, the second thing is, the third thing is

7. Unique parts of a process: the beginning, the middle, the end;

8. Unique elements in a story: the man, the woman

Concepts Covered with Plural (14 Concepts: 7 Lexical Plurals / 7 Regular Plurals)

1. Apples	6. Furniture	11. Pens
2. Women	7. Feet	12. Lives
3. Sheep	8. Fish	13. Parents
4. Mice	9. Toys	14. Houses
5. Libraries	10. Children	

Appendix II

Group Number		Definite Article Pretest	Definite Article Posttest	Regular Plural Pretest	Regular Plural Posttest	Lexical Plural Pretest	Lexical Plural Posttest
1	Mean	.7857	.7800	.7857	.9222	.7024	.9333
	N	15	15	14	15	14	15
	Std. Deviation	.13766	.16562	.19258	.13897	.25469	.14840
2	Mean	.7667	.8267	.6833	.8778	.5333	.7000
	N	15	15	15	15	15	15
	Std. Deviation	.16525	.11629	.27495	.13313	.35187	.35607
3	Mean	.7437	.8294	.7059	.9118	.6275	.8824
	N	17	17	17	17	17	17
	Std. Deviation	.18739	.13117	.25365	.10404	.20858	.19995
Total	Mean	.7644	.8128	.7228	.9043	.6196	.8404
	N	47	47	46	47	46	47
	Std. Deviation	.16310	.13771	.24283	.12407	.27814	.26285

Table II / 1: Pretest / posttest scores for tests of conscious knowledge

Appendix III

Group Number		Definite Article Pretest	Definite Article Posttest	Regular Plural Pretest	Regular Plural Posttest	Lexical Plural Pretest	Lexical Plural Posttest
1	Mean	.7348	.7697	.8556	.9107	.9091	.8333
	N	15	15	12	14	11	12
	Std. Deviation	.20115	.27139	.30462	.19738	.21556	.32567
2	Mean	.6286	.5794	.8909	.8056	.8929	.7037
	N	14	14	11	9	14	9
	Std. Deviation	.33304	.34367	.30151	.34861	.28947	.45474
3	Mean	.6460	.8375	.8867	.7424	.5577	.8846
	N	17	16	15	11	13	13
	Std. Deviation	.23717	.17396	.27997	.38811	.50160	.29957
Total	Mean	.6696	.7346	.8781	.8284	.7829	.8186
	N	46	45	38	34	38	34
	Std. Deviation	.25842	.28388	.28646	.30973	.38824	.35145

Table III / 1: Pretest/posttest scores for tests of natural language ability

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